

## CLAIMS

What is claimed is:

1. A method comprising:  
transmitting a bit interleaved optical data stream on an optical network.
2. The method of claim 1 further comprising:  
establishing a plurality of transmission time slots, each time slot  
corresponding to one of a plurality of optical transmitters.
3. The method of claim 2 further comprising:  
enabling each of the plurality of optical transmitters to transmit an  
optical bit during its corresponding time slot.
4. The method of claim 3 further comprising:  
adding an additional optical transmitter to the optical network.
5. The method of claim 2 wherein at least one of the plurality of optical  
transmitters is a vertical cavity surface emitting laser.

6. A network comprising:  
a head end,  
a plurality of transmitters coupled to the head end, each of the plurality of transmitters are enabled to transmit an optical bit during an established time slot corresponding to said each transmitter to create a bit interleaved optical data stream.

7. The network defined in Claim 6 wherein at least one of the plurality of transmitters comprises a vertical cavity surface emitting laser.

8. The network defined in Claim 6 wherein the head end is coupled to the plurality of transmitters via a passive optical network (PON) splitter.

9. An apparatus comprising:  
means for establishing a plurality of transmission time slots, each time slot corresponding to one of a plurality of optical transmitters; and  
means for transmitting a bit interleaved optical data stream onto an optical network.

10. The apparatus of claim 9 further comprising:

means for enabling each optical transmitter to transmit an optical bit during its corresponding time slot.

11. The apparatus of claim 10 further comprising:

means for adding an additional optical transmitter to the optical network.

12. The apparatus of claim 11, wherein at least one optical transmitter is a vertical cavity surface emitting laser.

13. A computer readable medium, which, when executed by a processing system, enables the system to perform:

establishing a transmission time slot for one of a plurality of transmitters in an optical network; and

enabling the one optical transmitter to transmit an optical bit only during the transmission time slot, so that the plurality of transmitters transmit a bit interleaved optical data stream on the optical network.

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